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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,488	11/20/2003	Ezequiel Cervantes	TUC920030138US1	2510
49080	7590	08/09/2007		
DALE F. REGELMAN 4231 S. FREMONT AVENUE TUCSON, AZ 85714			EXAMINER DARE, RYAN A	
			ART UNIT 2186	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/719,488	Applicant(s) CERVANTES ET AL.	
	Examiner Ryan Dare	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-7, 10-17 and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al., US Patent 7,103,665, in view of Krehbiel, JR. et al., US PGPub 2003/0217305
4. With respect to claim 1, Shinohara teaches a method to control access to logical volumes disposed in an information storage and retrieval system, comprising the steps of:

providing an information storage and retrieval system comprising a plurality of logical volumes, wherein said information storage and retrieval system is owned by a storage system owner in col. 6, lines 2-8 which describes the logical volumes and col. 5,

lines 55-62 which describes a user at an administrative terminal which operates a resource management utility. The examiner is equating this managing user with the "storage system owner" of the present claim;

providing a plurality of host computers, wherein each of said plurality of host computers is capable of communicating with said information storage and retrieval system, wherein at least two of said plurality of host computers are owned by different host computer owners, and wherein those different host computer owners differ from said storage system owner, in col. 6, lines 1-17;

forming by said storage system owner (N) host computer groups, wherein (N) is greater than or equal to 1, in col. 6, lines 18-43;

assigning by said storage system owner each of said plurality of host computers to one of the (N) host computer groups, in col. 6, lines 18-43;

forming by said storage system owner (N) logical volume groups, in col. 6, line 66 through col. 7, line 29;

assigning by said storage system owner one or more of a said plurality of logical volumes to the (i)th logical volume group wherein (i) is greater than or equal to 1 and less than or equal to (N), in col. 6, line 66 through col. 7, line 29;

maintaining a database associating the (i)th host host group with the (i)th logical volume group, in col. 7, lines 30-38;

permitting each of said one or more host computers assigned to the (i)th host computer group to access each logical volume comprising said (i)th logical volume group, in col. 7, lines 35-38;

wherein each of said plurality of host computers assigned to (i)th host computer group is not assigned to any other of the (N) host computer groups, and wherein each of said logical volumes assigned to the (i)th logical volume group is not assigned to any other of the (N) logical volume groups, in col. 7, lines 30-38.

Shinohara fails to teach leaving logical volumes unassigned from the logical volume groups. Krehbiel teaches:

wherein any logical volumes not assigned to any of the (N) logical volume groups remain unassigned, in the Abstract.

5. It would have been obvious to one of ordinary skill in the art, having the teachings of Shinohara and Krehbiel before him at the time the invention as made, to modify the logical volume management system of Shinohara with the logical volume management system of Krehbiel in order to have an unassigned volume that may be assigned to the group as a spare in the event that a primary volume in the group fails, as taught by Krehbiel in pars. 18-20.

6. With respect to claim 2, Shinohara teaches the method of claim 1, wherein one or more of said (N) host computer groups are owned by a first person, and wherein one or more of said (N) host computer groups are owned by a second person, wherein said first person differs from said second person, in col. 7, lines 1-8.

7. With respect to claim 3, Shinohara teaches the method of claim 1, further comprising the step of providing a storage area network, wherein said storage area network is capable of communicating with said information storage and retrieval system and with each of said plurality of host computers, in col. 6, lines 1-17.

8. With respect to claim 4, Shinohara teaches the method of claim 1, further comprising the steps of:

forming a plurality of unique identifiers; assigning a different one of said plurality of unique identifiers to each of said plurality of host computers; associating in said database each of said plurality of unique identifiers with one of said (N) host computer groups, in col. 6, lines 18-42 (Host Group #).

9. With respect to claim 5, Shinohara teaches the method of claim 4, further comprising the steps of:

requesting by one of said plurality of host computers to access a designated logical volume; determining that said requesting host computer is assigned to the (j)th host computer group, wherein (j) is greater than or equal to 1 and less than or equal to (N); determining if said designated logical volume is assigned to the (j)th logical volume group; operative if said designated logical volume is assigned to the (j)th logical volume group, permitting said requesting host to access said designated volume; operative if said designated logical volume is not assigned to the (j)th logical volume group, denying said requesting host access to said designated volume, in col. 7, lines 30-38.

10. With respect to claim 6, Burton teaches the method of claim 5, further comprising the steps of:

establishing the unique identifier assigned to said requesting host computer, in col. 6, lines 18-43;

determining that the requesting host computer is assigned to the (j)th logical volume group, in col. 7, lines 30-38.

Art Unit: 2186

11. With respect to claim 7, Shinohara teaches the method of claim 1, further comprising the steps of:

receiving a request to assign one or more host computers to the (k)th logical volume group, wherein (k) is greater than or equal to 1 and less than or equal to (N), in col. 8, lines 11-19;

assigning said one or more host computers to the (k)th logical volume group, in col. 8, lines 20-42.

12. With respect to claim 10, Shinohara teaches the method of claim 1, further comprising the steps of:

receiving a request to assign one or more host logical volumes to the (k)th logical volume group, wherein (k) is greater than or equal to 1 and less than or equal to (N), in col. 8, lines 11-19.

assigning said one or more logical volumes to the (k)th logical volume group, in col. 8, lines 20-42.

assigning identifiers to said one or more logical volumes newly-assigned to the (k)th logical volume group, in col. 7, lines 1-12.

13. With respect to claims 11-17 and 20, Applicant claims an article of manufacture comprising a computer useable medium having computer readable program code that performs the method of claims 1-7 and 10, and is therefore rejected using similar logic as claims 1-7 and 10.

14. With respect to claims 21-26, Applicant claims a computer program product usable with a programmable computer processor having computer readable program

code that performs the method of claims 1-6, and is therefore rejected using similar logic as claims 1-6.

15. Claims 8-9 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara et al. and Krehbiel as applied to claims 1-7 and 10-17 above, in view of Burton et al., US Patent 6,633,962.

16. With respect to claim 8, Shinohara et al. and Krehbiel teach all other limitations of the parent claim but fails to teach unassigning. Burton teaches the method of claim 1, further comprising the steps of:

receiving a request to unassign one or more host computers from the (k)th logical volume group, wherein (k) is greater than or equal to 1 and less than or equal to (N), in col. 11, lines 50-56.

unassigning said one or more host computers from the (k)th logical volume group, in col. 11, lines 50-56.

17. It would have been obvious to one of ordinary skill in the art, having the teachings of Shinohara, Krehbiel and Burton before him at the time the invention was made to modify the logical volume and host management system of Shinohara and Krehbiel with the logical volume and host management system of Burton in order to make a volume publicly accessible, which allows the logical volume to be reassigned to another group, as taught by Shinohara in col. 7, lines 9, lines 30-47.



Art Unit: 2186

18. With respect to claim 9, Shinohara et al. and Krehbiel teach all other limitations of the parent claim but fails to teach unassigning. Burton teaches the method of claim 1, further comprising the steps of:

receiving a request to unassign one or more host logical volumes from the (k)th logical volume group, wherein (k) is greater than or equal to 1 and less than or equal to (N), in col. 9, lines 42-47.

unassigning said one or more logical volumes from the (k)th logical volume group, in col. 9, lines 42-47.

19. It would have been obvious to one of ordinary skill in the art, having the teachings of Shinohara, Krehbiel and Burton before him at the time the invention was made to modify the logical volume and host management system of Shinohara and Krehbiel with the logical volume and host management system of Burton in order to make a volume publicly accessible, which allows the logical volume to be reassigned to another group, as taught by Shinohara in col. 7, lines 9, lines 30-47.

20. With respect to claims 18-19, Applicant claims an article of manufacture comprising a computer useable medium having computer readable program code that performs the method of claims 18-19, and is therefore rejected using similar logic as claims 18-19.

### ***Response to Arguments***

21. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection. The new Krehbiel reference has been supplied to teach the newly added limitation of independent claims 1, 11, and 21.

***Conclusion***

22. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar volume management systems.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

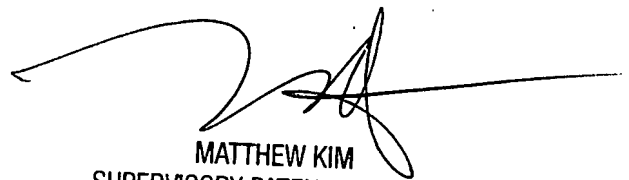
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Dare whose telephone number is (571)272-4069. The examiner can normally be reached on Mon-Fri 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571)272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan Dare/  
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August 6, 2007



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